

REMARKS

The Office Action in the above-identified application has been carefully considered and this amendment has been presented to place this application in condition for allowance. Accordingly, reexamination and reconsideration of this application are respectfully requested.

Claims 1-30 are in the present application. It is submitted that these claims were patentably distinct over the prior art cited by the Examiner, and that these claims were in full compliance with the requirements of 35 U.S.C. § 112. The changes to the claims, as presented herein, are not made for the purpose of patentability within the meaning of 35 U.S.C. sections 101, 102, 103 or 112. Rather, these changes are made simply for clarification and to round out the scope of protection to which Applicant is entitled.

The Abstract was objected to for improper language and format. In response, Applicant has amended the Abstract to conform with the recommended language and format. Accordingly, Applicant believes this objection has been overcome.

Claims 1-30 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to provide sufficient antecedent basis for various limitations in the claims. In response, Applicant has amended the claims in accordance with each of the Examiner's comments. Accordingly, Applicant believes this rejection has been overcome.

Claims 1, 4, 5, 7-16, 19, 20, and 22-30 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Benedetto et al. (Article entitled "Soft-Output Decoding Algorithms in

Iterative Decoding of Turbo Codes") in view of XP-000888685 (Disclosure entitled "Simplified Log-Map Algorithm"). However, for at least the following reasons, the cited references fail to obviate the present invention. The present invention uses a "correction term being expressed in a one-dimensional function relative to a variable." (Claims 1 and 16) The correction term is computed "using a coefficient representing a gradient of said function for multiplying said variable, the coefficient being expressed as a power exponent of 2." (Claims 1 and 16) As shown in Figure 16 and described on page 44 of the specification, this correction term uses two lines to linearly approximate the curve. This correction is due to the use of the absolute value of the difference between P and Q in the equation  $F = -a |P-Q| + b$ . By contrast (and as noted by the examiner), Benedetto uses a simplified expression  $F = -a x + b$ , which is analogous to the prior art linear approximation distinguished in the specification and shown in Figure 5A. Accordingly, Benedetto is an example of the prior art correction technique which the present invention improves upon. Further, the Examiner asserts the XP-000888685 document teaches a power exponent of 2. (Office Action p. 6) However, the document simply states that "B=4" and does not disclose the additional required steps that the Examiner makes. Namely, that since "4 =  $2^2$ ," and  $1/B$  is equivalent to the variable "a" in Benedetto, then " $a = 2^{-2}$ " which is a power exponent of 2. Although the Examiner's logic may appear plausible, the required steps are simply not disclosed in the references and only appear obvious with the benefit of hindsight. Therefore, for at least these reasons, Benedetto and the XP-000888685 document fail to render obvious the present invention and the rejected claims should now be allowed.

In view of the foregoing amendment and remarks, it is respectfully submitted that the application as now presented is in condition for allowance. Early and favorable reconsideration of the application are respectfully requested.

No fees are deemed to be required for the filing of this amendment, but if such are, the Examiner is hereby authorized to charge any insufficient fees or credit any overpayment associated with the above-identified application to Deposit Account No. 50-0320.

If any issues remain, or if the Examiner has any further suggestions, he/she is invited to call the undersigned at the telephone number provided below. The Examiner's consideration of this matter is gratefully acknowledged.

Respectfully submitted,  
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